

**Notice of Allowability**

Application No.

10/602,002

Examiner

Devona E. Faulk

Applicant(s)

LIM ET AL.

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 6/29/2007.
2. ☒ The allowed claim(s) is/are 1,3,4,6-13,16,17,19-21 and 23-28.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Remarks***

1. The applicant has amended claims 6, 10, 16 and 20 to overcome the 112 rejection set forth in the previous office action.
2. Claims 1, 3-4, 7-9, 13, 17, 19, 21, 23, 24 were indicated as allowable and remain in allowable form.
3. Claims 2, 5, 14, 15, 18 and 22 are cancelled.
4. The applicant amended claims 10 and 25 but the amendment did not place the claims in allowable form. The applicant agreed to an examiner's amendment to place claims 10-12 and 25-28 in allowable form.

### **EXAMINER'S AMENDMENT**

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Darleen J. Stockley (Reg. No. 54,257) on 9/13/2007.

#### **The claims are to be amended as follows:**

**Claim 10, line 8:** after "one", insert - - , wherein if a sound increase/decrease interval information is input, the sound increase/decrease information is stored in a memory when a sound increase/decrease interval is greater than a predetermined

Art Unit: 2615

minimum increase/decrease interval and less than a predetermined maximum

increase/decrease interval - - .

**Claim 25, line 7:** after "obtained", insert - - , wherein if a sound

increase/decrease interval information is input, the sound increase/decrease information

is stored in a memory when a sound increase/decrease interval is greater than a

predetermined minimum increase/decrease interval and less than a predetermined

maximum increase/decrease interval - - .

6. Claims 1,3-4,6-13,16,17,19-21,23-28 are allowed.

7. The following is the examiner's statement of reasons for allowance:

Regarding claims 1,4,7,10,13,17,21 and 25, prior art Bironas et al. (US 5,513,268)

discloses a variable digital control for electronic device with rotary switch control

including a memory, a command and information unit, a sound output unit and of a

sound increase/decrease interval. Prior art Katayama et al. (US 6,747,678) discloses

an audio system and its control method. Prior art Hayama et al. (US 4,611,344)

discloses an electronic volume control circuit. Prior art Sato et al. (US 4,527,230)

discloses a method of controlling a set point. Prior art Shimizu et al. (US 2002/0031236)

discloses an input apparatus, reproducing apparatus and volume adjusting method.

Prior art Kato et al. (US 5,081,682) discloses an on-vehicle automatic loudness control

apparatus. Prior art Ponto (US 4,239,938) discloses a multiple input signal digital

attenuator for combined output. Prior art Sakanishi et al. (US 5,010,577) discloses an

electronic volume device. Prior art Yochum (US 4,412,182) discloses an apparatus for

controlling an operational characteristic of a controlled device in accordance with the

Art Unit: 2615

position of a movable member. Prior art Ouchida (US 4,706,294) discloses an audio control device. Prior art Endoh et al. (US 4,270,177) discloses a digital amplitude control for digital audio signals. Prior art Ono (US 4,349,77) discloses a volume control apparatus. However, regarding claims 1,4,7,13,17,21, the prior art of combination thereof fails to disclose or make obvious wherein if the sound increase/decrease interval information is input from a command and information input unit, a system control unit stores the sound increase/decrease interval information in a memory when the sound increase/decrease interval is greater than a minimum increase/decrease interval set in a sound output system and less than a maximum increase/decrease interval set in the sound output system. Regarding claims 10 and 25, the prior art or combination thereof fails to disclose or make obvious wherein if a sound increase/decrease interval information is input, the sound increase/decrease information is stored in a memory when a sound increase/decrease interval is greater than a predetermined minimum increase/decrease interval and less than a predetermined maximum increase/decrease interval.

Therefore, the prior art or combination thereof fails to disclose or make obvious a volume control apparatus and a volume control method as claimed.

Claims 3,6,8,9,11,12,16,19,20,23,24,26-28 are allowed due to dependency on claims 1,4,7,10,13,17,21 and 25.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 2615

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848.

The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2615. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DEF

  
VIVIAN CHIN  
SUPERVISING PATENT EXAMINER  
TECHNOLOGY CENTER 2600

Application/Control Number: 10/602,002

Page 6

Art Unit: 2615